

Claims

1. A hydrodynamic brake comprising a stator (1) which has an annular shell (3) with a multiplicity of blades (4), a rotor (2) which has a corresponding annular shell (5) with  
5 a multiplicity of blades (6), which annular shells (3, 5) of the rotor (2) and stator (1) are so arranged that they form a toroidal space (7), a medium which is intended to be supplied to the toroidal space (7) in order to effect a braking action, a first pipe circuit (35) which caters for transfer of the medium from an outlet from the toroidal space (7) to a first inlet to the toroidal space (7), and a second pipe circuit (37) which caters for  
10 transfer of the medium from a storage space (34) to the toroidal space (7),  
characterised in that the second pipe circuit (37) caters for transfer of the medium to the toroidal space (7) via a second inlet (44) which is separately arranged relative to the first inlet (42) to the first pipe circuit (35).
- 15 2. A hydrodynamic brake according to claim 1, characterised in that the second inlet incorporates at least one input hole (44) situated in a second region where the pressure during a braking process is always substantially lower than the pressure of the medium in the first pipe circuit (35).
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- 20 3. A hydrodynamic brake according to claim 2, characterised in that the pressure in the second region corresponds substantially to atmospheric pressure.
4. A hydrodynamic brake according to claim 2 or 3, characterised in that the input  
25 hole (44) of the second inlet is situated substantially centrally in the toroidal space (7).
5. A hydrodynamic brake according to claim 4, characterised in that the input hole (44) of the second inlet is situated adjacent to a free end portion of a blade (4).
6. A hydrodynamic brake according to claim 5, characterised in that the input hole  
30 (44) of the second inlet is situated in the stator (1).

7. A hydrodynamic brake according to any one of the foregoing claims, characterised in that the second pipe circuit (35) incorporates a pump (26) for transferring the medium to the toroidal space (7).

5 8. A hydrodynamic brake according to claim 7, characterised in that said pump is a gear pump (26).

9. A hydrodynamic brake according to any one of the foregoing claims, characterised in that the first inlet to the toroidal space (7) incorporates at least one input hole (42)  
10 situated in a radially outer region of the stator (1).

10. A hydrodynamic brake according to any one of the foregoing claims, characterised in that the said outlet from the toroidal space (7) incorporates at least one output hole (43) situated in a radially outer region of the stator (1).

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